SECTION 3. REGIONAL DESCRIPTION & CADD STANDARDS

3.1 GEOGRAPHIC LOCATION & CHARACTERISTICS

Mountain Home Air Base is located in South Central Idaho in a high desert savannah, adjacent to the Owyhee Mountain Range. It is approximately 80 kilometers (50 miles) southeast of Boise, Idaho in Elmore County, Idaho. It is at 43°07' latitude and 115° 42' longitude and falls within the Mountain Time Zone. Elevation above sea level is approximately 975 meters (3,200 feet).

The terrain of the Base is relatively flat with approximately 17 meters (55 feet) of drop from the northeast corner of the Base to the southwest corner (5.6 kilometers (3.5 miles)).

The surface soils are generally silts and silty sands overlaying basalt. The basalt is at varying depths throughout the site and extensive soil borings are required to determine locations and depths.

The list of approved vegetation on Base is located in Section 4, Landscape and Site Development Standards.

3.2 CLIMATE

Semi-arid region with the following monthly average mean temperature and average precipitation:

- Annual Average Temp. 10.6 C (51° F)
- January Monthly Temp. -1.7° C (29° F)
- July Monthly Temperature 23° C (74° F)

Annual Average Rainfall 263 mm (10.35 in)
Average Annual Snowfall 330 mm (13 in)
Temperature Extremes

- Summer 38° C (101° F)
- Winter -18° C (0° F)

Prevailing winds are from the north, northwest.
Amount of sunny days per year averages 274 days.

3.3 INFRASTRUCTURE

3.3.1 Transportation

Roads

The Base is connected to urban areas by Route 67 and Interstate 84. Roads on Base are generally asphaltic concrete over a frost-free ground base with concrete curbs and gutters.

Railroads

Amtrak and Union Pacific Railroad provide rail service to Boise. Rail service to Mountain Home is being eliminated.

Air Service

Six airlines service Boise Air Terminal (80 kilometers (50 miles) from Base). Mountain Home Municipal Airport services small planes and commuter flights.

3.3.2 Utilities

Water Distribution System

Water is supplied to the Base from six wells. Depth of wells are generally 186 meters (610 feet) and they have high mineral content. Water is stored in two elevated water tanks, one ground level water tank and one below ground water tank. Capacity of the elevated tanks are 757 082 liters (200,000 gallons) and 946 353 liters (250,000 gallons). Capacity of ground level water tank is 1 892 710 liters (500,000 gallons). The capacity of the below ground water tank is 3 785 410 liters (1,000,000 gallons).

Sewage System (Sanitary and Storm)

The Base sewage treatment plant was built in 1998 and consists of sequencing batch reactors and lime stabilization treatment. Clean, treated wastewater can be used for irrigation, dust control, or other uses, or pumped to a system of new rapid infiltration basins, or discharged to a surface stream if necessary. The treatment system includes

removal of nitrogen to provide additional protection for the aquifer from which the base derives drinking water. The treated sludge complies with current sludge management regulations and produces a Class A material suitable for use as a fertilizer or in range reclamation.

The only underground storm drainage system on base is located in the Flight Line area. Oil-water separators have been phased out in most areas of the base and shall not be incorporated into new projects. Refer to Civil Engineering Standards outside of the Flight Line. Most runoff is collected in roadside depressions or french drains. Drainage is normally disposed of by evaporation/percolation.

Electrical System

Commercial electrical power is provided from an on-base substation by Idaho Power Company. The buss and switching capacity is currently 25 MVA. The primary and backup transformers are rated at 30 MVA and 14 MVA, respectively. The distribution voltage provided to the government switch yard is 12470/7200 volts.

The Base is served by two alternately routed lines. The primary line operator at 138 kV and the backup at 69 kV.

The government's reclosers are located in a switchyard adjacent to the Idaho Power Co. substation. Eight McGraw-Edison type USA vacuum reclosures are utilized.

There is one overhead line, located in Idaho Power easements throughout the base, serving the Oasis housing area and school. This system is owned and maintained by Idaho Power Co. The remainder of the Base is served by eight government circuits, circuit A through H, routed from the switch yard.

Natural Gas System

Natural gas is supplied by Intermountain Gas Co.

The gas supply is distributed throughout base from two main points with metering stations.

The Base central hot water plant which is used to heat most of the operational buildings was converted in 1992 to gas fired boilers with oil backup.

Jet Fuel

A jet fuel line is installed to service flight line.

Telephone System

U.S. West provides service for residential and commercial lines. A separate Base communication system is provided by 366 Communications Squadron.

Cable TV

Century Communications provides TV cable service throughout the base with either overhead or underground cable. All underground cable shall be installed in 51-mm (2-inch) conduit.

3.4 CADD STANDARDS

3.4.1 General

Mountain Home Air Force Base uses AutoCAD Map 2000 for CADD software; MicroStation (95 or later version) files are acceptable. CADD layering requirements are outlined below. All Standard AutoCAD fonts shall be used.

3.4.2 Civil Engineering CAD Layering Standards

1. All CADD layering standards and naming conventions shall follow the Tri-Services Spatial Data Standard (TSSDS). The latest publicized version of the TSSDS shall be used. The TSSDS can be accessed via the internet at the following web address: http://tsc.wes.army.mil

2. All new buildings will be located by their geodetic coordinates.

3. All blocks and cells shall come from the TSSDS cell/block libraries, and be modified to fit design specifications.

4. The contractor shall provide all projects in DWG format compatible with AutoCAD Map 2000 format on ZIP disk or CDROM.

5. All information shall be drawn to full (1:1) scale in Model Space and to a scale (i.e. ¼”=1’ or 1:400) in Paper Space.

6. All text shall be in accordance with the TSSDS requirements for the entities that it applies to.

3.4.3 Mandatory Layer Names

1. All layering names and conventions shall comply with the names and conventions specified in the TSSDS.